course, only adds to the cost of production. After considering the points mentioned, the best method of arranging the details of the jig, so that it has as few dimensions as possible requiring absolute accuracy, should also receive attention; that is, the jig should be as simple as possible, and still be so designed as to accurately locate the parts to be machined.

In Figs. 28 and 29 are shown two jig designs which will serve to illustrate these points. The part for which a jig is required is shown in Fig. 27. In the preliminary machining operation the work is turned to diameters *A* and *B* and to lengths *C* and *D.* The limit of accuracy required on end *A* is — /$_{t}$, or any diameter from i|-J inch as a minimum to i jj inch. For end *B* a

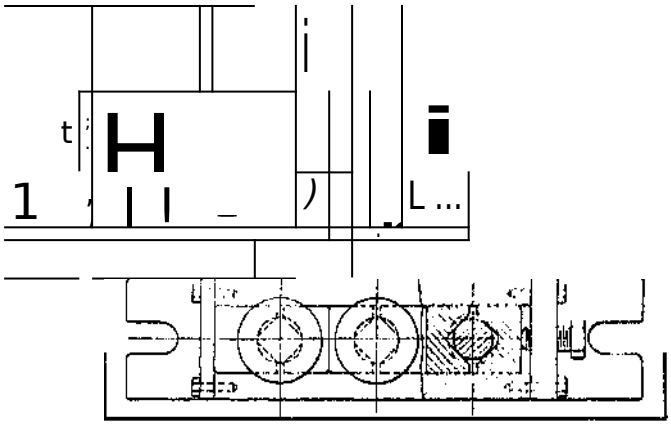

Fig. 29. Fixture which will hold a Number of Pieces, Fig. 27, properly, even when Diameters of Locating Parts vary

finer limit of —0.002 is necessary, so that this end should be used as the

locating part for the next operation; *viz.,* the milling out of the slot *E* which must be central with the part *IL* A design such as shown in Fig. 28 is not uncommon for this operation, and with it fairly accurate results will be secured; but if the locating diameter on the work is slightly small, say 0.002 inch, then the forcing of the piece over to one side by the locking screw *A* will result in an inaccuracy in the milling operation. The locating holes *B* must be the exact size of the locating part of the work, and unless every piece is a push lit (which is un-